

**Application by Highways England for an Order Granting Development Consent for the M4 Junctions 3 to 12 Smart Motorway (Case ref. TR010019)**

**Agenda for issue specific hearing dealing with matters relating to the environment**

On 23 October 2015 interested parties and others were notified that an issue specific hearing dealing with matters relating to the environment would take place on **Tuesday 17 and Wednesday 18 November 2015** at the **Radisson Blu Edwardian Heathrow Hotel, 140 Bath Road, Hayes, Middlesex, UB3 5AW**. The hearing room will be available from 9.30am and the hearing will commence at 10.00am on both days. On Tuesday 17 the hearing is expected to adjourn by about 5.00pm. It will resume at 10.00am on Wednesday 18 and is expected to close by about 1.00pm. In order to ensure that those attending the hearing can make the best use of the time, we have prepared an agenda as attached.

**Administrative arrangements**

If you did not do so by the pre-notified deadline, it is vital for parties intending to attend to now give prior notice to the case team of who will attend, who will speak and which points they wish to address. In accordance with Rule 14(3) of the Infrastructure Planning (Examination Procedure) Rules 2010 (as amended), any oral representations should be based on representations previously made in writing by the particular participant.

Please provide your interested party reference number in any communication and mark it for the attention of the M4 Junctions 3 to 12 Smart Motorway case team.

## **Agenda for issue specific hearing dealing with the environment**

**17 and 18 November 2015**

### **A. PRELIMINARY MATTERS**

- 1** Establishing the baseline for the Environmental Impact Assessment (EIA): to what extent is the methodology agreed with consultees and interested parties (IP)?
- 2** Has the list of projects which is included within the cumulative impact assessments (Environmental Statement (ES) Appendix 16.1 and 16.2) been agreed with statutory consultees? APP-356 and APP-357
- 3** The Goodman Colnbrook Strategic Rail Freight Interchange (SRFI) application is currently before the Secretary of State (SoS) as an appeal. If the SoS was to grant planning permission, how would that project affect Highways England (HE)'s assessments of road traffic, air quality, noise and any other impacts for the M4 scheme?
- 4** In response to First Round Questions (FRQ) PD-005 E4.7.13 South Buckinghamshire District Council (S Bucks DC) raised the potential disruption which would arise if the construction of other projects (such as Heathrow Express depot, and Iver Relief Road) takes place at the same time as the M4 scheme. Has any consideration been given to cumulative impact which may arise from a combination of developments taking place in one area at the same time?
- 5** Construction Environmental Management Plan (CEMP) – now that a contractor has been identified to construct the scheme if consent is given (response to FRQ 4.2.7 REP2-02), can the CEMP be revised to include more detailed provisions? In particular can the concerns of London Borough of Hillingdon (LB Hill) re Construction Compound 11 be addressed?

### **B. TRAFFIC FORECASTING**

#### *Forecasting basis*

- 1** Are the traffic forecasts reported in the Highways England Traffic Forecasting Report for the M4 Smart Motorway (dated October 2014 and submitted at Deadline I REP1-003, Doc 3 Appendix 1) based on the most up to date methodologies - National Transport Model and National Trip End Model - in accordance with Department for Transport (DfT) Road Traffic Forecasts 2015 (dated March 2015)?
- 2** Re Section 1.5 of the DfT Road Traffic Forecasts 2015 report, it is stated that the forecasts in the DfT report should not be used to appraise individual road schemes, nor should they be used to consider

the right level of capacity on a specific road or solutions to specific local issues. DfT goes on to state that analyses of specific schemes are expected to use bespoke models fitted to local conditions to inform decisions. What then is the relationship between the model used in the DfT Report and the model used for the M4 Smart Motorway?

- 3** Were the methodologies developed by the same contractors, or at least in a consistent manner?
- 4** Re Section 2.13 of the DfT Road Traffic Forecasts 2015 report, which summarises changes made to the forecasting approach between 2013 and 2015, has the M4 Smart Motorway modelling taken account of these changes in its forecasting approach?
- 5** Have the concerns in relation to the DfT Road Traffic Forecasts 2013, cited in the 2015 version, been taken into account in the HE M4 Smart Motorway Traffic Forecasting methodology?
- 6** Re Section 3.1 of the HE Traffic Forecasting Report, the starting point for the development of the forecast year highway networks was the 2009 base year highway network as described in the Local Model Validation Report. To what extent is 2009 a valid base year, given that it is already 6 years ago and much has changed in the interim?
- 7** Re Section 1.4 of the HE Traffic Forecasting Report, the model appears to have evolved substantially over the period of the M4 Smart Motorway development. What is the nature and significance of the changes, and how much confidence should we therefore have in the current modelling?
- 8** Has the HE M4 Smart Motorway Traffic Forecast been independently assessed and verified?

#### *Traffic growth forecasts*

- 9** Re Section 2.49 of the DfT Road Traffic Forecasts 2015 report, which states that efficiency improvements are forecast to result in a 40% improvement in the average fuel consumption of the car fleet, a 34% improvement for light goods vehicles (LGVs) and a 14% improvement for heavy goods vehicles (HGVs), since a lot depends on these forecasts in terms of emissions and public health, how solid and reliable are they, on what assumptions do they rely, and have these metrics been used in the HE M4 Smart Motorway modelling?
- 10** Re Table 3.3 of the DfT Road Traffic Forecasts 2015 report, which states that traffic growth on the Strategic Road Network is forecast to increase by 29-60% by 2040, and congestion is forecast to increase by 13-20% by 2040 (with the weekday peak up by 14-35%), does the applicant recognise these figures, since the M4 Smart Motorway appears to forecast lower figures throughout?

*Effect of traffic growth forecasts on emissions and health*

- 11** Re Sections 3.54-3.63 of the DfT Road Traffic Forecasts 2015 report, which records DfT's forecasts for emissions, and in particular Section 3.59 which states that CO<sub>2</sub> is forecast to fall by between 3% and 26% from 2010 to 2040, are these figures recognised in the M4 Smart Motorway modelling?
- 12** Re Section 3.61 of the DfT Road Traffic Forecasts 2015 report, this states in the forecast for NO<sub>x</sub> emissions that these will decline by 65% to 73% between 2010 and 2040 largely due to the assumption of declining emissions per vehicle mile expected to be achieved through European vehicle standards. There is a critical dependency on the implementation of European vehicle standards to achieve this decline. Are these figures assumed in the M4 Smart Motorway modelling? In view of current uncertainty as to the achievement of the standards, how realistic is this assumption?
- 13** Re Section 3.61 of the DfT Road Traffic Forecasts 2015 report, which states that PM<sub>10</sub> emissions are forecast to reduce by 92% to 94% between 2010 and 2040, again on the assumption of improvements in vehicle PM<sub>10</sub> emissions through European vehicle standards, are these figures recognised in the M4 Smart Motorway modelling and how realistic is this assumption?

*Realism and uncertainty in modelling*

- 14** Re Section 4.4 of the HE Traffic Forecasting Report, which discusses the treatment of uncertainty in forecasting, how were the uncertainties addressed, and what confidence level do the applicant and other IPs have in this process?
- 15** Re Section 6.1 of the HE Traffic Forecasting Report, which discusses the realism tests that have been undertaken to demonstrate that the modelled demand responses are plausible, both in the direction and scale of change, were these realism tests done independently of the modelling contractor?
- 16** Re Section 7.2 of the HE Traffic Forecasting Report, which considers the key highway impacts of the Core Scenario, and states that the overall levels of induced trips relative to the Do-Minimum scenario are less than 0.3% in all time periods in both forecast years, to what does this refer (it seems very low compared with other traffic forecasts in the HE and DfT Road Traffic Forecasting Reports)?
- 17** Re Section 7.4 of the HE Traffic Forecasting Report, which summarises the report's conclusions, how does the traffic growth of 24% stated for the Core Growth Scenario relate to the traffic growth range of 29-60%

stated for the Strategic Road Network in Clause 15 of the Executive Summary of DfT's Road Traffic Forecasting Report 2015?

- 18** Re Section 7.4 of the HE Traffic Forecasting Report, how does the applicant explain the fact that the traffic growth figures for the design year of 2037 are stated to be the same for the High Growth Scenario as for the Core Growth scenario, and only slightly different (in one traffic direction only) for the Low Growth scenario?
- 19** Re the previous question, what levels of confidence do the applicant and other IPs have that the High Growth and Low Growth scenarios represent realistic high and low bounds?

#### *Distributional Effects across the Wider Road Network*

- 20** Re Section 7.4 of the HE Traffic Forecasting Report, what level of confidence do the applicant and other interested parties have in the forecast 1% increase in flow on the M25 (J10-17)?
- 21** Re Section 7.4 of the HE Traffic Forecasting Report, what is the view of interested parties, in particular local authorities, on the stated distributional effects (i.e. no more than an additional 1200 trips per hour (c 0.2%) in any time period across the whole matrix)?
- 22** How would the applicant demonstrate that the study area used for traffic forecasting ensures that an accurate assessment is provided of changes to traffic flows in terms of the wider road network?
- 23** What is the applicant's response to Buckinghamshire County Council's (Bucks CC) assertion in its written representation at Deadline II REP2-039 that the ES submitted in support of the draft Development Consent Order (dDCO) does not adequately assess the impact of the proposed smart motorway scheme on the local road network during construction or operations and that no mitigation measures have been proposed?

### **C. AIR QUALITY**

#### *Study area and data*

- 1** Has any agreement been reached with LB Hill and S Bucks DC on the study area for the assessment of construction effects and for the assessment of operational effects? Are there any other IPs who raise any issue as to the definition of the study area?
- 2** Do the local planning authorities (LPA) have any comments on the monitoring data in their air quality management areas (AQMA) and identify any areas of particular concern?
- 3** Do the LPAs have any comments on the prediction of emissions in their AQMAs including for NO<sub>2</sub> and PM<sub>10</sub>?

- 4** Para 5.11 of the National Policy Statement for National Networks (NPSNN) addresses effects on existing AQMAs and conditions where new AQMAs may be required. To what extent would the M4 scheme prevent the achievement of compliance with air quality objectives in the AQMAs affected by the scheme or require new AQMAs or change the size of existing AQMAs?
- 5** Can local authorities and IPs who do not agree the study area identify the additional areas which they consider should be included within the study area, and with their reasons for so doing?
- 6** The monitoring data from the Automatic Urban and Rural Network (AURN) site in Hillingdon is not included in ES Tables 6.12 and 6.13. However data from the co-located diffusion tube has been included. Can the applicant explain this omission and how the inclusion from this monitor might have affected the modelling?
- 7** Can the applicant clarify why data sets from 2009 to 2013 have been used (ES Table 6.4.3 in Appendix 6.4). How could this have affected the results of the modelling?
- 8** In ES para 6.2.79 reference is made to an unpublished research project by Laxen and Marner (ref 6-12). Can the applicant provide this research?

*Assessment of effects*

- 9** In the methodology adopted for the air quality assessment, does HE use the Long Term Trends (LTT) methodology in Interim Advice Note IAN 170/12 v3, or the alternative "interim" version of the LTT method, which is more pessimistic about the progress made on reducing vehicular emissions?
- 10** Having regard to the recently reported failures of vehicles to meet European test standards on emissions, what impact does this have on the assumptions used and assessments provided in the ES, in particular with regard to the numbers and types of vehicles assumed to be Euro 6/VI compliant by 2022?
- 11** How realistic are the assumptions of emissions factors used in the assessment of air quality impacts in the ES in the light of recent disclosures? What result would be gained through a reassessment using different trends in vehicular emission improvements to provide worse case scenarios?
- 12** Can the applicant explain why concentrations of NO<sub>2</sub> are expected to be lower in 2037 than in 2022? How much confidence can be placed on the anticipation of lower emission rates from vehicles between the opening year and the design year, having regard to recent revelations of incorrect vehicular emission test results?

- 13** LB Hill has submitted a consultant's review of the HE methodology for calculating the air quality impacts. Has this been discussed with HE, and can the outcome of such discussions be presented at the hearing?
- 14** Have any other LPAs reviewed the HE methodology and, if so, what are their findings?
- 15** In ES para 6.4.1 it is stated that the fleet of vehicles in the UK is subject to steady renewal and changes to the air quality effects will change even without the scheme – can the applicant give further clarification on this assumption in the light of current uncertainties in vehicle emissions. Would this change the base line assumptions both for NO<sub>2</sub> and PM<sub>10</sub>?
- 16** In ES para 6.2.49 the number of additional HGVs is considered to be below the relevant threshold and therefore the effect on sensitive receptors is not considered significant. In the light of uncertainties in traffic forecasting and emissions, can the applicant give its considered opinion that this conclusion is still valid?

*Impact on European Union (EU) limits*

- 17** To what extent would the M4 scheme prevent the achievement of compliance with air quality objectives in the AQMAs affected by the scheme?
- 18** Para 5.13 of the NPSNN lays out when the SoS should refuse consent due to non-compliance with the air quality Directive. The applicant in para 6.18.7 of the ES states that the scheme is not predicted to result in a *significant* air quality impact. Can the applicant clarify the use and meaning of the word significant?
- 19** Having regard to the opinion of Robert McCracken QC on the issue of assessing significance as submitted by the Campaign for Better Transport <sup>REP2-036</sup> and others, would an increase in the level of pollution above the EU limit values be illegal, even if that increase was to affect a small part of a wider zone?

*Locations where EU limits would be exceeded*

- 20** Receptors which are predicted by the applicant to experience a medium magnitude increase in annual mean NO<sub>2</sub> concentrations with predicted concentrations above the objective value with the scheme in place are shown on the following plans:
- Receptors A65\_1, A65a\_1, A65c and X612 are shown on Drawing 6.5a and X47 is shown on Drawing 6.5b of APP-192 p11.
  - Receptor X35 is shown on Drawing 6.10 and X36 and X37 are shown on Drawing 6.10a of APP-194 p11.

The applicant identifies in answer to FRQ E4.6.7 four receptors predicted to experience a medium magnitude increase in annual mean NO<sub>2</sub> concentrations, with predicted concentrations above the objective value with the Scheme in place. These are A65 – on King Street Lane (B3030) adjacent to M4 overbridge; A65a – on King Street Lane (B3030) adjacent to M4 overbridge; X35 – at Lake-End, adjacent to M4, near junction 7 westbound on slip; X612 – on King Street Lane (B3030) adjacent to M4 overbridge. Can the applicant explain the discrepancy with the drawings in the ES?

- 21** Is there any agreement with the local authorities that these are the most significantly affected in terms of changes in air quality? S Bucks DC and Bucks CC state in their local impact report <sup>REP2-050</sup> that in excess of 50 properties would be impacted directly as a result of the scheme, together with three sensitive businesses, an ostrich farm, animal sanctuary and caravan park. Can the location of these receptors please be identified by means of a map? To what extent do these receptors reflect the findings of the HE assessment?
- 22** Slough Borough Council (SBC) also refers in its LIR <sup>REP2-047</sup> to residential receptors likely to be affected in the construction and operational phases. Can SBC identify the locations of receptors most likely to be affected, and identify any differences with the applicant's findings?

#### *Mitigation measures*

- 23** In para 6.2.3 of the ES it states that assumptions have been based on the M3 J2 to 4A Smart Motorway scheme regarding construction plant equipment <sup>APP-146</sup>. Can the applicant give examples of any other experience gained from this project such as any monitoring data for pollutants of concern, and effects of traffic management measures?
- 24** In ES para 6.2.42 it is stated that during construction traffic management will reduce the speed of traffic and this may result in some temporary improvement of air quality as emissions from these vehicles will be lower for key pollutants – has the applicant considered similar traffic management measures during the operational phase of the project?
- 25** In ES para 6.2.44 the applicant states that no mitigation measures have been included for the operational phase as no significant air quality effects are anticipated – does the applicant still hold this view in the light of uncertainties in current and future vehicle emissions and continuing dialogue with the EU on air quality infractions in the UK?
- 26** Para 5.14 of the NPSNN states that the SoS should consider whether mitigation measures put forward are acceptable and at para 5.15 gives examples of such measures. The applicant thus far has considered that



the air quality impacts of the scheme are not significant and therefore mitigation is not required. Can the applicant give its considered opinion on whether mitigation measures should be included?

- 27** To what extent are there proven mitigation measures which could be put in place to reduce the impact on sensitive receptors?
- 28** Should there be mitigation which is sufficient to reduce impacts on air quality to the level that would be experienced without the scheme at 2022, or should there be an objective to employ mitigation to reduce pollution below EU limits in order to potentially provide positive benefits from the scheme?
- 29** A Health Impact Assessment has been submitted by the applicant at Deadline III<sup>1</sup>. Table 22 states that a minor negative impact for air quality is expected in the operational phase and that no mitigation is recommended. In the light of uncertainties in traffic forecasting and air quality does the applicant consider that this should be reviewed? Can the LPAs and statutory authorities, in particular Public Health England (PHE), give their considered opinions?
- 30** SBC considers that a continuous NO<sub>x</sub> analyser should be installed at an agreed location over a minimum period of 10 years from the date of consent to determine compliance. Has this been further discussed with the applicant and if so, what are the outcomes? What is the view of the other LPAs and statutory authorities?

#### **D. NOISE AND VIBRATION**

- 1** Are the locations of sensitive receptors and the areas most exposed to noise correctly identified by the applicant (ES Drawing 12.1)? Have the full impacts been properly assessed? If not, what further work should be undertaken?
- 2** To what extent has the study area for the assessment of noise and vibration including the spatial scope (study area) for both construction and operational phases of the scheme together with the identification of the 21 monitoring locations been agreed?
- 3** Is there any dispute as to the identification of the nearest sensitive receptor to each construction compound, which would be subject to the highest noise levels from construction compound activities? The results and assessment were reported in paragraphs 12.4.80 to 12.4.87 of the ES, with associated Table 12.15.
- 4** The applicant's response to FRQ E4.7.6 refers to applications for consents under section 61 of the Control of Pollution Act 1974 for the

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<sup>1</sup> Examination library reference TBC

proposed construction works, excluding non-intrusive surveys. Applications for Section 61 consents will include details on proposed working hours and construction activities to be carried out during those hours, including night-time works. Any conditions included in consents /licences/permits will be documented in the final CEMP, secured by Requirement 8 (Schedule 2) of the dDCO. Are the local authorities satisfied with this mechanism proposed by the applicant to control hours of working and construction activities?

**5** The applicant sets out the noise limits agreed with the local authorities on the M3 J2 to 4a scheme as possible limits for the M4 scheme. These are:

- Daytime and evening: 75 dB LAeq, 1 hour (free field), with restrictions on times when piling works can be carried out;
- Night-time: 75 dB LAeq, 1 hour (free field), with restrictions on the types of activities that can be carried out.
- Suggested vibration limits, based on agreed limits with three Local Boroughs on the M3 J2 to 4a scheme, are:
- Trigger level of 1 mm/s peak particle velocity for occupied residential and educational buildings:
- Trigger level of 3 mm/s peak particle velocity for occupied commercial premises (applies to premises where work is not of an especially vibration sensitive nature and for potentially vulnerable unoccupied buildings); and
- Trigger level of 5 mm/s peak particle velocity for other unoccupied buildings.

The procedures for managing noise and vibration would be documented in the CEMP. Are the local authorities satisfied that adequate protection would be afforded to sensitive receptors by the suggested approach?

**6** To what extent would the enhanced noise mitigation strategy (HE response to FRQ E4.7.15) affect the noise environment of sensitive receptors? Can the main beneficiaries (i.e. those currently most affected by noise and the extent to which noise would be reduced) be identified?

**7** The applicant's response to FRQ E4.7.17 is noted. Has any survey work been undertaken to assess whether the allowance made in the calculations for noise reflections is realistic?

**8** A number of representations call into question the effectiveness of low noise surfacing as a mitigation measure, and imply that any benefits quickly deteriorate with road use. Can HE clarify whether low noise surfacing becomes less effective over the design life of a scheme, or

are there measures that are taken to mitigate against any deterioration?

- 9** How far are the local authorities and IPs satisfied with the applicant's amended schedule of noise barriers REP2-001, Appendix F - amended ES Drawing 12.2 which shows the locations and extent of new and replacement noise barriers?
- 10** Can the applicant provide a schedule of properties in each local authority area which may experience a noise level of L10 (18-hour) of 68dB(A) or be entitled to noise compensation or insulation under the Land Compensation Act 1973 and Noise Insulation Regulations 1975 (as amended 1988)?
- 11** What type of noise barrier exists/is proposed for the property known as Hillside, Mill Lane, Sindlesham?
- 12** Would there be benefits in terms of noise reduction in the provision of a 3 metre acoustic fence for the length of the M4 on the Lower Earley side between J11 and 19, and around Black Boy roundabout at Shinfield and Winnersh?

## **E. VISUAL IMPACT**

- 1** In the applicant's response to FRQ, information is provided on the location and height of signs and gantries REP2-002, Section 4 Appendix C. Does this information assist IPs in their consideration of potential visual impact from the scheme?
- 2** Are winter views being prepared for the Landscape and Visual Impact Assessment (LVIA)? When will these be available for submission?
- 3** In areas within the scheme where vegetation clearance will be necessary, are there locations where the area to be subject to replanting would be smaller than the original area of vegetation? Can such locations be identified? Would a reduction in the area of vegetation in these locations have an effect on the visual impact of the scheme?
- 4** Does S Bucks DC consider that the additional information provided at Section 4 Appendix C of the applicant's response to FRQs REP2-002 helps in assessing whether the Zones of Visual Impact (ZVI) and LVIA are adequate?
- 5** Are the LPAs content that the viewpoints used in the LVIA are representative?
- 6** The applicant states that the main carriageway lighting will be replacements to the existing lighting and will use modern light emitting diode (LED) luminaires which control light distribution. LEDs are also to

be used for gantry lighting. As a result there would be less lighting spill and less light pollution than from existing lighting. However, will there be lighting in new locations as a result of, for example, changes to slip roads and bridges? Can locations where the position of lighting will change please be identified and the effects of such change be described for the hearing?

- 7** A submission has been received from a resident of Holyport Road Maidenhead concerning new lighting which has been installed on the M4 in the vicinity of his property. Is that new lighting using LED luminaires?
- 8** *An assessment of night-time construction lighting is currently being prepared to be submitted by Deadline III (5 November 2015). Any issues relating to this assessment to be discussed at the hearing.*
- 9** Residential receptors at Winvale would experience a reduction in the depth of the planting which screens the M4, and the introduction of Gantry G4-16 which would be a prominent element in the view (FRQ E4.2.10). The applicant states that mitigation through planting within the highway boundary is not an option, neither is the relocation or reduction in size of Gantry G4-16. Has the potential for off-site planting been investigated?
- 10** The occupiers of residential properties in Keats Way, West Drayton would also experience permanent visual impacts because of the reduced width of the tree belt which screens the M4 (FRQ E4.2.10). Has the potential for off-site planting been investigated?
- 11** Concern has been raised by some residents whose properties abut the boundary of the M4. In some cases they consider that vehicles using the former hard shoulder would be able to see directly into the windows of their houses. This is particularly the case where the motorway is on an embankment above the level of the dwellings (e.g. Holyport Road, Maidenhead), and may also be the case if there are any instances of properties which are on a higher level than the motorway. Has the applicant given any thought as to how these concerns might be addressed?
- 12** Do the changes to acoustic fencing proposed in the amended schedule of noise barriers REP2-001, Appendix F - amended ES Drawing 12.2 have any effect on the assessment of visual impact?

## **F. WATER ENVIRONMENT**

- 1** No Statement of Common Ground (SoCG) between the Environment Agency (EA) and HE had been received at the time the agenda was prepared. EA and HE are requested to prepare to inform the hearing of

the latest position and set out their case in respect of any areas of disagreement between the two parties. Matters raised in EA's submissions include:

- a. Flood Risk Assessment does not fully assess the impact of the scheme on flood risk as quantified losses of floodplain storage have not been properly calculated. It also states that all of the proposed surface widening is within flood zone one, whereas parts are within zones 2 and 3.
- b. It is not clear how much land raising would be within the flood plain in the surface widening between J5-6 and J12-11. Mitigation is only proposed for surface water runoff. If losses of floodplain storage have not been properly quantified and downstream impacts not properly assessed then it cannot be certain that flood risk will not increase as a result of the proposed works. Has this been addressed by the applicant?
- c. Application does not give sufficient information on length or design of proposals to extend culverts.
- d. Clarification is sought on several issues, including why Water Framework Directive Compliance Assessment (WFDCA) has identified 19 surface water bodies that may be impacted by the proposed works whereas only three of these were taken forward to a stage 4 assessment; and if the correct waterbody had been assessed for Chalvey Ditch?
- e. EA does not agree that the impact on ecology is neutral as set out in table 9.5 of the ES, due to impact on river habitats as a result of bridge widening and culvert lengthening. EA notes that any net loss of habitat is not supported by NPSNN and seeks further assessment is undertaken to identify what levels of compensation may be required. What is the applicant's position on this?
- f. Are there any other WFDCA issues which remain to be resolved?

**2** LB Hill

- a. Does not agree that a complete WFDCA has been undertaken as it does not include the potential impact of culverting of Frogs Ditch. Has this been a subject of discussion with the applicant?
- b. Does not consider that the scheme will deliver the reduction in flood risk as required in the National Planning Policy Framework (NPPF) since improvements are restricted to areas where works will be. What is the applicant's position on this matter?

**3** As the lead local flood authority, Bucks CC requires agreement on detailed drainage design to be agreed. Has the authority's concerns re the use of conventional oversized pipes and gullies been addressed?

Will enhancements to water courses and biodiversity be achieved through the effective use of sustainable drainage systems (SuDS)?

- 4** Will HE be seeking to disapply the flood defence consenting regime as set out in Water Resources Act 1991 and land drainage bylaws?
- 5** In response to South East Water's (SEW) concerns, HE can perform a hydrogeological risk assessment in order to demonstrate to SEW that groundwater resources will not be impacted upon. Can a SoCG be produced between HE and SEW once the results are available?
- 6** Can the applicant clarify the latest position regarding management of surface water and the latest position reached having regard to concerns expressed by SEW?
- 7** Can HE explain the process by which pollution protection measures will be secured for water which is discharged from new or relocated drainage systems?
- 8** Have the potential impacts on the physical nature of the channel and the biological quality of the watercourse at the River Thames at Bray been properly assessed?

## **G. OTHER MATTERS**

- 1** A Health Impact Assessment was provided at Deadline III by the applicant. Can the LPAs and statutory authorities, in particular PHE, give their considered opinions on the assessments of impacts and recommendations?
- 2** To what extent do the draft EMP, CEMP and HEMP provide sufficient information on mitigation measures? Is it clear how the documents will interact in their implementation?
- 3** What progress is being made on planning for the high level survey of closed circuit television (CCTV) locations referred to by the applicant in response to FRQ 4.1.7?
- 4** Paras 4.36 - 4.47 of the NPSNN address climate change adaptation. The applicant has not submitted a report on climate change. To what extent would this add to the evidence submitted through the ES and to the examination?
- 5** The NPSNN (ref para 5.16 – 5.19) notes that applicants should consider carbon impacts of a scheme including appropriate mitigation measures. In response to relevant representations <sup>REP1-003</sup>, the applicant states that the increase in CO<sub>2</sub> attributable to the scheme has been shared with DfT and that DfT has advised that the scheme would not have a material impact on the Government's ability to meet its carbon reduction target. Can the applicant produce the information

shared with DfT and DfT's response? Are there any circumstances in which the assessment of CO<sub>2</sub> attributable to the scheme would need to be re-assessed?